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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/412,647	10/05/1999	HIDETOSHI KINOSHITA	402/594	9926

7590 04/22/2004

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EXAMINER

JACOBSON, TONY M

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/412,647

Applicant(s)

KINOSHITA, HIDETOSHI

Examiner

Tony M Jacobson

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 6-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 October 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 6-13 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 6.

Drawings

2. New corrected drawings are required in this application because of the deficiencies noted on the Notice of Draftsperson's Patent Drawing Review (Form PTO 948), included with the previous Notice of Restriction (Paper No. 4). Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. The terms "shorter time interval" and "longer time interval" in claim 5 are relative terms which render the claim indefinite. The terms "shorter" and "longer" are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Although it might be inferred that the two recited time intervals are being compared to each other, there is no definite indication of to what the time intervals are being compared.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Tendler (US 4,937,796).

8. Regarding claim 1, Tendler discloses in Figs. 1 and 2, a sound collecting device comprising a transducer (14) responsive to input of a sound wave to vibrate (the inherent mode of operation of a sonar transducer), producing a corresponding acoustic signal; an amplifier (34) amplifying the acoustic signal from the transducer; and a vibrating circuit (30) connected to the transducer in parallel to the amplifier to vibrate the

transducer (see column 4, lines 24-32).

9. Regarding claims 2 and 4, the device of Tendler further comprises a switch (32), which selectively establishes and blocks communications between the transducer (14) and the amplifier (34) and between the transducer (14) and the vibrating circuit (30); and (inherently -- since the transmit/receive switch must rapidly switch between transmit and receive modes during operation, some means, such as microprocessor 42, must be provided for controlling the switching) a controller, which controls a switching operation of the switch (32).

10. Regarding claim 3, the device of Tendler further comprises a controller (70), which controls an operation of the vibrating circuit.

Allowable Subject Matter

11. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims (and amended to overcome the rejection under 35 USC 112, second paragraph, stated above).

Conclusion

Art Unit: 2644

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Koderer et al. (US 4,404,541), Hollowbush (US 5,059,946), and Sindler (US 5,173,881) each disclose ultrasonic obstacle detection systems in which the self-cleaning capability of ultrasonic transducers is acknowledged. (See Koderer abstract; Hollowbush column 3, lines 36-39; and Sindler column 10, lines 31-34.)

14. Shintaku (US 4,317,009), Sekine (US 4,891,796), and Danial (US 5,844,471) each disclose transducers for outdoor use which are heated to prevent or correct problems due to ice or snow buildup, with Dekine disclosing a temperature sensor to initiate heating in response to freezing temperatures.

15. Deom et al. (US 4,833,660) and Zuckerman (US 4,891,628) disclose systems in which ultrasonic detectors are utilized to detect the formation and accumulation of ice or other environmental matter on surfaces.

16. Fujie et al. (US 5,037,189) discloses a cleaning apparatus for an automobile rear-view mirror which utilizes ultrasonic vibrators to prevent the accumulation of water, frost, and ice, including a temperature sensor to deactivate the vibrators when the temperature is detected above a predetermined level.

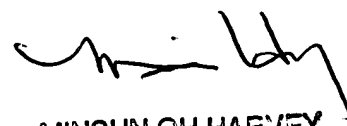
Art Unit: 2644

17. Ono et al. disclose a combination microphone and speaker for a communications transceiver, in which a single transducer acts to receive sound waves and is vibrated by a vibrating circuit (the audio output amplifier of the transceiver) with a switch that selectively establishes and blocks communications between the transducer and an amplifier and between the transducer and the vibrating circuit. (See Figs. 11 and 12.)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony M Jacobson whose telephone number is 703-305-5532. The examiner can normally be reached on M-F 11:00-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W Isen can be reached on 703-305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



MINSUN OH HARVEY
PRIMARY EXAMINER

tmj
April 19, 2004